

## Problem of the Week-3: An Equation over Integers

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Does the equation

$$x^2 - 3xy + p^2y^2 = 6$$

where  $p$  is a prime, have any solutions in integers? Prove your answer.

As always, show your work, fully explain and justify your answer.

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Posting Date 2/6/15. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 5 pm on 2/17/15.